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EXAMINER	
GOETZE, SIMON A	

ART UNIT	PAPER NUMBER
2617	

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03/25/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/658,614	GINZBURG ET AL.	
	Examiner	Art Unit	
	SIMON A. GOETZE	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This Action is in response to Applicant's amendment filed on December 20, 2007. Claims, 1, 9, 11, 17, 19, 22, 25, and 31 have been amended. **Claims 1-33** are still pending in the application. **This Action is made FINAL**.

Claim Objections

The objection to claim 32 has been withdrawn as the appropriate correction has been made.

Claim Rejections - 35 USC § 112

The 35 USC § 112 rejections to claims 1, 9, 19, 22, 25, and 31 have been withdrawn as the appropriate corrections have been made.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. **Claims 1-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fischer et al. (US Patent 5,889,772)** in view of **Zweig et al. (US Patent 7,154,854)**.

Consider **claim 1**, Fischer et al. discloses a method comprising:

comparing a first bit error rate for transmissions without request to send protection and comparing a bit packet error rate for transmissions with request to send protection *(Column 4, Lines 52-60; Column 8, Lines 36-52; Column 9, Lines 25-45 and 55-67; Column 10, Lines 16-23)*; and

adjusting transmission parameters if said first bit error rate is not attributable to collisions *(read as adjustment is made if noise is the contributing factor to bit error rate – Column 11, Lines 21-41; Column 12, Lines 7-20)*.

However, Fischer et al. discloses dynamically adjusting thresholds for data transmissions for each respective destination, but this decision is based on bit error rate, not packet error rate. Additionally they fail to specifically disclose comparing the "with" and "without" statistics with each other in order to make a determination on adjusting a transmission parameter.

In related prior art, Zweig et al. discloses comparing the current packet error rate for packets sent without request to send protection to the stored packet error rate threshold which causes the system to subsequently send the packets with request to send protection. Therefore, they are comparing a first packet error rate for transmission without request to send protection with a second packet error rate for transmissions with request to send protection. When these error rates are compared a number of factors, such as collision, can be used to make transmission adjustments such as implementing fragmentation or employing RTS/CTS transmissions *(Figures*

4 and 5 – Abstract; Column 8, Lines 21-67; Column 11, Lines 30-40 and 62-67; Column 12, Lines 1-22).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the teachings of Zweig et al. with Fischer et al. in order to make an appropriate determination for when communications should be protected with RTS/CTS to provide higher quality communications without the administrator having to analyze the data and make the decision.

Consider **claim 2**, as applied to claim 1 above, Fischer et al. as modified by Zweig et al. discloses setting said request to send protection to a predefined upper limit *(Column 8, Lines 9-20)*.

Consider **claim 3**, as applied to claim 2 above, Fischer et al. as modified by Zweig et al. discloses reducing said predefined upper limit of said request to send protection if transmitting with said predefined upper limit causes packet error rates attributable to collisions *(Column 8, Lines 9-20; Column 10, Lines 25-45)*.

Consider **claim 4**, as applied to claim 1 above, Fischer et al. as modified by Zweig et al. discloses:

collecting a packet error rate of request to send packets *(Column 11, Lines 21-41)*; and

collecting a packet error rate of data frames transmitted with request to send protection *(Column 11, Lines 21-41)*.

Consider **claim 5**, as applied to claim 1 above, Fischer et al. as modified by Zweig et al. discloses adjusting a data rate if said first packet error rate is not attributable to collisions *(adjusting fragmentation would ultimately adjust data rate – Column 12, Lines 7-30)*.

Consider **claim 6**, as applied to claim 1 above, Fischer et al. as modified by Zweig et al. discloses activating fragmentation if said first packet error rate is not attributable to collisions *(Column 12, Lines 7-30)*.

Consider **claim 7**, as applied to claim 1 above, Fischer et al. as modified by Zweig et al. discloses:

collecting a packet error rate of frames transmitted without said request to send protection *(Column 9, Lines 36-45)*; and

collecting a packet error rate of frames transmitted with said request to send protection *(Column 11, Lines 21-41)*.

Consider **claim 8**, as applied to claim 1 above, Fischer et al. as modified by Zweig et al. discloses deactivating said request to send protection if said first packet error rate is not attributable to collisions *(Column 10, Lines 25-45)*.

Consider **claim 9**, Fischer et al. discloses a method comprising:

activating request to send protection *(Column 8, Lines 9-19)*;

calculating a first bit error rate of request to send frames *(Column 4, Lines 52-60; Column 8, Lines 36-52; Column 9, Lines 25-45 and 55-67; Column 10, Lines 16-23)*; and

adjusting request to send protection if said first bit error rate is below a collision rate threshold *(Column 10, Lines 25-45)*.

However, Fischer et al. discloses dynamically adjusting thresholds for data transmissions for each respective destination, but this decision is based on bit error rate, not packet error rate. Additionally they fail to specifically disclose comparing the "with" and "without" statistics with each other in order to make a determination on adjusting a transmission parameter.

In related prior art, Zweig et al. discloses comparing the current packet error rate for packets sent without request to send protection to the stored packet error rate threshold which causes the system to subsequently send the packets with request to send protection. Therefore, they are comparing a first packet error rate for transmission without request to send protection with a second packet error rate for transmissions with request to send protection. When these error rates are compared a number of factors, such as collision, can be used to make transmission adjustments such as implementing fragmentation or employing RTS/CTS transmissions *(Figures 4 and 5 – Abstract; Column 8, Lines 21-67; Column 11, Lines 30-40 and 62-67; Column 12, Lines 1-22)*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the teachings of Zweig et al. with Fischer et al. in order to make an appropriate determination for when communications should be protected with RTS/CTS to provide higher quality communications without the administrator having to analyze the data and make the decision.

Consider **claim 10**, as applied to claim 9 above, Fischer et al.. as modified by Zweig et al. discloses that said activating request to send protection comprises setting request to send protection to predefined upper limit *(Column 8, Lines 9-20)*.

Consider **claim 11**, as applied to claim 9 above, Fischer et al. as modified by Zweig et al. discloses calculating a second packet error rate of data frames sent under request to send protection *(Zweig et al. as discussed above uses this error rate in the decision for RTS/CTS implementation)*; and adjusting a transmission parameter according to said second packet error

rate if said first packet error rate is below a collision rate threshold *(Column 10, Lines 16-45; Column 11, Lines 21-41; Column 12, Lines 7-20)*.

Consider **claim 12**, as applied to claim 11 above, Fischer et al. as modified by Zweig et al. discloses:

determining whether transmission quality is above a transmission quality threshold *(Column 11, Lines 21-33)*; and

increasing a data rate *(adjusting fragmentation would ultimately adjust data rate – Column 12, Lines 7-30)*.

Consider **claim 13**, as applied to claim 12 above, Fischer et al. as modified by Zweig et al. discloses:

determining whether a transmission quality is below a transmission quality threshold *(Column 11, Lines 21-33)*; and

decreasing a data rate *(adjusting fragmentation would ultimately adjust data rate – Column 12, Lines 7-30)*.

Consider **claim 14**, as applied to claim 11 above, Fischer et al. as modified by Zweig et al. discloses that said adjusting a transmission parameter comprises adjusting a data rate *(adjusting fragmentation would ultimately adjust data rate – Column 12, Lines 7-30)*.

Consider **claim 15**, as applied to claim 11 above, Fischer et al. as modified by Zweig et al. discloses that said adjusting a transmission parameter comprises adjusting fragmentation *(Column 12, Lines 7-30)*.

Consider **claim 16**, as applied to claim 9 above, Fischer et al. as modified by Zweig et al. discloses that said adjusting request to send protection comprises deactivating said request to send protection *(Column 10, Lines 25-45)*.

Consider **claim 17**, as applied to claim 9 above, Fischer et al. as modified by Zweig et al. discloses:

calculating a third packet error rate for data frames sent without request to send protection *(Column 9, Lines 36-45)*;

deriving a fourth packet error rate attributable to noise *Column 11, Lines 21-41; Column 12, Lines 7-20)*; and

adjusting a transmission parameter based on said fourth packet error rate *(Column 12, Lines 7-30)*.

Consider **claim 18**, as applied to claim 17 above, the combination of Fischer et al. as modified by Zweig et al. further discloses that deriving said fourth packet error rate attributable to noise comprises dividing the result of a fifth packet error rate of transmissions without request to send protection minus said first packet error rate of request to send frames, by, one minus said first packet error rate of request to send frames.

Consider **claim 19**, Fischer et al. discloses an article comprising a storage medium having stored thereon instructions that, when executed by a processor, result in:

comparing a first bit error rate of transmissions without request to send protection with a second bit error rate of transmissions with request to send protection *(Column 4, Lines 52-60; Column 8, Lines 36-52; Column 9, Lines 25-45 and 55-67; Column 10, Lines 16-23)*; and

adjusting a data rate if said first bit error rate is not due to collisions *(read as adjustment is made if noise is the contributing factor to bit error rate – Column 11, Lines 21-41; Column 12, Lines 7-20)*.

However, Fischer et al. discloses dynamically adjusting thresholds for data transmissions for each respective destination, but this decision is based on bit error rate, not packet error rate. Additionally they fail to specifically disclose comparing the "with" and "without" statistics with each other in order to make a determination on adjusting a transmission parameter.

In related prior art, Zweig et al. discloses comparing the current packet error rate for packets sent without request to send protection to the stored packet error rate threshold which causes the system to subsequently send the packets with request to send protection. Therefore, they are comparing a first packet error rate for transmission without request to send protection with a second packet error rate for transmissions with request to send protection. When these error rates are compared a number of factors, such as collision, can be used to make transmission adjustments such as implementing fragmentation or employing RTS/CTS transmissions *(Figures 4 and 5 – Abstract; Column 8, Lines 21-67; Column 11, Lines 30-40 and 62-67; Column 12, Lines 1-22)*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the teachings of Zweig et al. with Fischer et al. in order to make an appropriate determination for when communications should be protected with RTS/CTS to provide higher quality communications without the administrator having to analyze the data and make the decision.

Consider **claim 20**, as applied to claim 19 above, Fischer et al. as modified by Zweig et al. discloses that said instructions further result in setting said request to send protection to a maximal level *(Column 8, Lines 9-20)*.

Consider **claim 21**, as applied to claim 19 above, Fischer et al. as modified by Zweig et al. discloses that said instructions further result in adjusting a fragmentation size if said first packet error rate is not due to collisions *(Column 12, Lines 7-30)*.

Consider **claim 22**, Fischer et al. discloses a communication device comprising:

a dipole antenna to transmit frames *(part of the wireless communication devices and wireless local area network access points)*;

a comparator to compare a first bit error rate of transmissions without request to send protection with a second bit error rate for transmissions with request to send protection *(Column 4, Lines 52-60; Column 8, Lines 36-52; Column 9, Lines 25-45 and 55-67; Column 10, Lines 16-23)*; and

an adjustor to adjust a data rate if said first bit error rate is not due to collisions *(read as adjustment is made if noise is the contributing factor to bit error rate – Column 11, Lines 21-41; Column 12, Lines 7-20)*.

However, Fischer et al. discloses dynamically adjusting thresholds for data transmissions for each respective destination, but this decision is based on bit error rate, not packet error rate. Additionally they fail to specifically disclose comparing the "with" and "without" statistics with each other in order to make a determination on adjusting a transmission parameter.

In related prior art, Zweig et al. discloses comparing the current packet error rate for packets sent without request to send protection to the stored packet error rate threshold which

causes the system to subsequently send the packets with request to send protection. Therefore, they are comparing a first packet error rate for transmission without request to send protection with a second packet error rate for transmissions with request to send protection. When these error rates are compared a number of factors, such as collision, can be used to make transmission adjustments such as implementing fragmentation or employing RTS/CTS transmissions *(Figures 4 and 5 – Abstract; Column 8, Lines 21-67; Column 11, Lines 30-40 and 62-67; Column 12, Lines 1-22)*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the teachings of Zweig et al. with Fischer et al. in order to make an appropriate determination for when communications should be protected with RTS/CTS to provide higher quality communications without the administrator having to analyze the data and make the decision.

Consider **claim 23**, as applied to claim 22 above, Fischer et al. as modified by Zweig et al. discloses that said adjustor is to adjust a fragmentation if said first packet error rate is not due to collisions *(Column 8, Lines 9-20)*.

Consider **claim 24**, as applied to claim 22 above, Fischer et al. as modified by Zweig et al. discloses that said adjustor is to adjust request to send protection levels if said first packet error rate is due to collisions *(Column 12, Lines 7-30)*.

Consider **claim 25**, Fischer et al. discloses a device comprising:

a comparator to compare a first bit error rate for transmissions without request to send protection with a second bit error rate for transmissions with request to send protection *(Column*

4, Lines 52-60; Column 8, Lines 36-52; Column 9, Lines 25-45 and 55-67; Column 10, Lines 16-23); and

an adjustor to adjust a data rate if said first bit error rate is not due to collisions *(read as adjustment is made if noise is the contributing factor to bit error rate – Column 11, Lines 21-41; Column 12, Lines 7-20)*.

However, Fischer et al. discloses dynamically adjusting thresholds for data transmissions for each respective destination, but this decision is based on bit error rate, not packet error rate. Additionally they fail to specifically disclose comparing the "with" and "without" statistics with each other in order to make a determination on adjusting a transmission parameter.

In related prior art, Zweig et al. discloses comparing the current packet error rate for packets sent without request to send protection to the stored packet error rate threshold which causes the system to subsequently send the packets with request to send protection. Therefore, they are comparing a first packet error rate for transmission without request to send protection with a second packet error rate for transmissions with request to send protection. When these error rates are compared a number of factors, such as collision, can be used to make transmission adjustments such as implementing fragmentation or employing RTS/CTS transmissions *(Figures 4 and 5 – Abstract; Column 8, Lines 21-67; Column 11, Lines 30-40 and 62-67; Column 12, Lines 1-22)*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the teachings of Zweig et al. with Fischer et al. in order to make an appropriate determination for when communications should be protected with RTS/CTS

to provide higher quality communications without the administrator having to analyze the data and make the decision.

Consider **claim 26**, as applied to claim 25 above, Fischer et al. as modified by Zweig et al. discloses that said adjustor sets said request to send protection to a maximal level *(Column 8, Lines 9-20)*.

Consider **claim 27**, as applied to claim 26 above, Fischer et al. as modified by Zweig et al. discloses that said adjustor reduces said level of said request to send protection if transmitting with said maximal level causes packet error rates attributable to collisions *(Column 8, Lines 9-20; Column 10, Lines 25-45)*.

Consider **claim 28**, as applied to claim 25 above, Fischer et al. as modified by Zweig et al. discloses that said comparator is to:

collect a packet error rate for request to send packets *(Column 11, Lines 21-41)*; and

collect a packet error rate for data frames transmitted with request to send protection *(Column 11, Lines 21-41)*.

Consider **claim 29**, as applied to claim 25 above, Fischer et al. as modified by Zweig et al. discloses that said adjustor is to adjust a data rate if said first packet error rate is not attributable to collisions *(adjusting fragmentation would ultimately adjust data rate – Column 12, Lines 7-30)*.

Consider **claim 30**, as applied to claim 25 above, Fischer et al. as modified by Zweig et al. discloses that said adjustor is to activate fragmentation if said first packet error rate is not attributable to collisions *(Column 12, Lines 7-30)*.

Consider **claim 31**, Fischer et al. discloses a communication system comprising:

a station *(Abstract – Figures 1-3 – Column 4, Lines 52-60; Column 8, Lines 36-52)*;

an access point *(Abstract – Figures 1-3 – Column 7, Lines 29-46)*;

a comparator to compare a first bit error rate for transmissions without request to send protection with a second bit error rate for transmissions with request to send protection *(Column 4, Lines 52-60; Column 8, Lines 36-52; Column 9, Lines 25-45 and 55-67; Column 10, Lines 16-23)*; and

an adjustor to adjust a data rate if said first packet error rate is not due to collisions *(read as adjustment is made if noise is the contributing factor to bit error rate – Column 11, Lines 21-41; Column 12, Lines 7-20)*.

However, Fischer et al. discloses dynamically adjusting thresholds for data transmissions for each respective destination, but this decision is based on bit error rate, not packet error rate. Additionally they fail to specifically disclose comparing the "with" and "without" statistics with each other in order to make a determination on adjusting a transmission parameter.

In related prior art, Zweig et al. discloses comparing the current packet error rate for packets sent without request to send protection to the stored packet error rate threshold which causes the system to subsequently send the packets with request to send protection. Therefore, they are comparing a first packet error rate for transmission without request to send protection with a second packet error rate for transmissions with request to send protection. When these error rates are compared a number of factors, such as collision, can be used to make transmission adjustments such as implementing fragmentation or employing RTS/CTS transmissions *(Figures*

4 and 5 – Abstract; Column 8, Lines 21-67; Column 11, Lines 30-40 and 62-67; Column 12, Lines 1-22).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the teachings of Zweig et al. with Fischer et al. in order to make an appropriate determination for when communications should be protected with RTS/CTS to provide higher quality communications without the administrator having to analyze the data and make the decision.

Consider **claim 32**, as applied to claim 31 above, Fischer et al. as modified by Zweig et al. discloses that said adjustor sets said request to send protection to an elevated level *(Column 8, Lines 9-20).*

Consider **claim 33**, as applied to claim 32 above, Fischer et al. as modified by Zweig et al. discloses that said adjustor reduces said level of said request to send protection if transmitting with said elevated level causes packet error rates attributable to collisions *(Column 8, Lines 9-20; Column 10, Lines 25-45).*

Response to Arguments

Applicant's arguments with respect to **claims 1, 19, 22, 25, and 31** (and their respective dependent claims) have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

2. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

3. Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Simon A. Goetze whose telephone number is (571) 270-1113. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Paul Harper can be reached on (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Simon A. Goetze/
Examiner, Art Unit 2617

March 14, 2008

/VINCENT P. HARPER/
Supervisory Patent Examiner, Art Unit 2617